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HOME SAFETY Review

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THE SAN JOSE STORY

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THE COVER: left to right, Dwight M. Bissell, M.D., health off., John M. Hayakawa, ch. pub. health educator, and Miss Margaret Nelson, ch. pub. health nurse, Health Dept., San Jose, Calif., look at a copy of *San Jose Home Safety Project* published by the department.

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The Home Safety Conference is the meeting point for representatives of national organizations conducting programs that include prevention of accidents in the home. It officially represents National Safety Council home safety service subscriber-members. Conference officers (with the exception of the staff secretary) serve voluntarily without pay as the council's safety officers and planning board for home safety program.

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HOME SAFETY REVIEW

A Magazine for Home Safety Program Leaders

VOL. 14 **NO. 2**

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TABLE OF CONTENTS

The San Jose Experience, *Dwight M. Bissell, M.D.* 3
Model Homes of Safety 8
Using Health Councils, *James E. Downey, Jr.* 9
Home Hobby Hazards, *Charles M. Cameron, Jr., M.D.* 10
Backyard Swimming Pools, *Paul R. Young* 13
A Safe Home . . . Happy Children, *Miss Elizabeth Linquest, R.N.* .. 14
Effect of Oral Doses of DDT, *Wayland J. Hayes, Jr., M.D., William F. Durham, Ph.D., and Cipriano Cueto, Jr., B.S.* 15
Infant and Child Safety, *Miss June Grommes, R.N.* 16
Home Safety Guide for Public Health Nurses 18
Involving Health Department Staff, *Harold E. Samuelson* 21
Sanitarians and Safety 22
New Method of Artificial Respiration, *P. A. Marsteller* 24
A.M.A. Studies Poisoning Problem 26
First-Class Killer—Carbon Tetrachloride, *Louis W. Spolyar, M.D.* 27
Your Pet, *Diana Henley* 28
Discarded Refrigerators 30
Safety Ad 32

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THE SAN JOSE EXPERIENCE

1951–1956

Dwight M. Bissell, M.D.
Health Officer
Health Department
San Jose, Calif.

The first batch of 66,700 student-parent safety pledges distributed in county schools was assembled in the office of the Santa Clara County Chapter, N.S.C., in San Jose, Calif., for forwarding to Governor Knight. Three little girls who won awards of merit for letters they sent in with their pledges are, left to right, Sandra Oiseth, 11, of Longfellow School, first; Eleanor Lee, 11, of Selma Olinder, second; and Karen Cauhape, 10, of Benjamin Cory, third. With them is Dr. Levi Gilbert, gen. supervisor, San Jose Unified School Dist.

THE "IDEAS" WHICH prompted entry of the health department in San Jose, Calif., into home accident prevention had their beginnings with the recognition that new areas of need in public health must be met.* Since fewer persons are ill with communicable disease than in past years, the attention of the health department could be applied to other needs.

It was natural that one guide could be our mortality statistics which demonstrated that thought should be given to those problem areas such as vascular diseases, cancer, and accidents, representing as they do, the leading causes of death to our people. For example, strides have been made within recent years in finding some of the basic mechanisms in the development of atherosclerosis, and the work in cancer research in the last ten years has been productive. Reducing mortality and morbidity from accidental causes is a problem which is being approached by a variety of agencies.

The prevention of automobile accidents and the resulting injuries as well as the problems concerned with the prevention of industrial injuries have been given widespread comment for many years. It is within relatively recent years that we have seen positive steps being taken to cope with the most challenging of the accident groups—the home accident.

Progress in public health has occurred usually because someone has seen a need for something to be done to prevent illness or death, or both. After the Kalamazoo, Mich., demonstration in home safety, we felt that something could be done by health departments to prevent home accidents. In San Jose we examined some of the morbidity data which had been collected. It was found that the majority of injuries being treated at the Emergency First Aid Station were those occurring in the home.

There is a local chapter of the National Safety Council in San Jose. This organization, we found, was also interested in the prevention of home injuries and was willing to participate in a study of the problem. Due to the rapid growth of the community, our department had a heavy schedule in basic public

*This article is based on a report, *San Jose Home Safety Project* published by the Department of Public Health, San Jose, Calif.

Not Incl.

(Left to right) Gilbert L. Rhodes, chief, Home Safety Project, Calif. Dept. of Pub. Health; Herbert H. Hasson, assoc. dir., Div. of Med. and Pub. Health, W. K. Kellogg Foundation, Battle Creek, Mich.; Dr. Levi Gilbert, gen. supervisor, San Jose Unified School Dist.; Dwight M. Bissell, M.D., health officer, San Jose, Calif.

health work. For several years the staff had expressed an interest in home accidents; however, it was obvious that our circumstances would not allow us to do a detailed study and promote a home safety program without added staff. Funds granted by the Kellogg Foundation enabled us to employ the additional personnel necessary for a project of this kind.

Prior to the inception of our study, we consulted with the United States Public Health Service and the National Safety Council. We also received guidance from the American Public Health Association's Subcommittee on Accident Prevention. In July 1951, we began this 5-year project to develop, through various approaches, a greater understanding of the home accident problem.

One of the first questions asked was why should a health department become involved in a safety program when this was the announced purpose of many other organizations in the city? It was pointed out that almost everyone in San Jose has a home accident every year and that it is the chief cause of mortality among persons between 1 and 25 years. Could we be effective in controlling home accidents?

After studying the problem, it was decided that the epidemiology of home accidents was not different from the epidemiology of communicable disease, chronic disease, or any other problem which health departments have undertaken. It is a matter of defining the problem, establishing a case finding procedure, then determining diagnosis, and finally treatment and evaluation.

While it is true that there are many other "safety organizations" in the community, each one works in a particular area of concern, and home safety usually does not constitute its prime interest; for example, the National Safety Council in this community is concerned primarily with motor and transportation safety and industrial safety to some degree. Insurance companies have some interest in home safety, but their major concern lies elsewhere.

Perhaps one of the most cogent reasons for a health department's being in the field of home safety is that it occupies a strategic position in the community; it can bring together the divided interests in home safety and aid them in working as one group. The health department has nothing to sell; it has no proprietary interest; it is interested in all elements of the community, rich and poor; it has many associated relationships with other governmental agencies such as welfare, recreation, fire, police, et cetera; it also has well established techniques in health education, sanitation, nursing, and other fields related to medicine.

Public health has entry legally and otherwise into many homes of the community where accidents may occur. Furthermore, San Jose operates an Emergency First Aid Station where contacts are made with home accident cases. It is not our opinion, however, that the availability of a first aid station is necessary for a health department to undertake home accident prevention activities.

Of course, there is no one method for every community in America. Each community has a variety of organizations which may provide the necessary leadership. In some areas it is possible that Safety Councils, Parent-Teacher Associations or even industrial groups may have the leadership which is necessary to pull all elements of a home safety organization together.

The Approach

In the planning of the home safety program, a formalized statement of the goal and objectives to be achieved within that framework was developed.

From our 1951 report, "the ultimate goal of our home safety program is the reduction of home accident mortality and morbidity." The objectives that were agreed upon for the Home Safety Project were: (1) to find methods for obtaining statistical data on home accidents; (2) to determine the responsibilities a local health department can accept in stimulating a community home safety program; (3) to find ways in which home safety can be integrated into the regular activities of the health department; and (4) to develop awareness of the people in the community to home safety problems and to encourage community acceptance of safe home practices.

Analysis

During the 10 years from 1946 through 1955, there were a total of 170 home accidental deaths in the City of San Jose. This information was derived from death certificates of city residents. In every year without exception falls were the leading cause of home accidental deaths. A total of 104 deaths or 61 percent of home accidental deaths during this

10-year period was the result of falls. The three years in which this cause resulted in the greatest number of deaths were 1954 with 16 deaths, 1949 with 15 deaths, and 1950 with 13 deaths. During this time the population increased from 80,000 to 115,000.

Another factor in the review of death certificates which should be mentioned is that in a certain number of the deaths it was difficult to distinguish homicide and suicide from home accident fatalities.

In reviewing our experience in the developing of methods for better reporting, it would seem that there exist a number of approaches which satisfy needs in this area. They are: (1) to stimulate and extend reporting of home injuries from potential sources of information, with the eventual hope of achieving complete or nearly complete reporting; (2) to obtain statistical information through limited sources and not attempt complete description of the problem; (3) to employ sample population surveys; and (4) to rely on existing statistical data and not attempt to establish reporting of home injuries.

What Is Integration?

Our concept of integration is that home safety in a health department is a departmental program. This procedure means that all divisions of the health department are involved in home safety activities. It also means that one division has complete responsibility for carrying out the activities, although one division may be responsible for coordinating all activities within the department. If this framework is accepted, and it is at the City of San Jose Health Department, then everyone has a role in promoting home safety.

We see the concept of integration as involving: (1) the individual; that is, a change in his behavior pattern or at least an altered response potential, and (2) his works; that is, the activities and projects, those tangible evidences of his participation in a program.

As it concerns the individual, integration is the very real acceptance of a particular discipline, in this case home safety, so that the behavior response or pattern is changed. It implies that this change involves at least a sensitization or ability to respond in some positive way, when given the proper stimulus. This sensitization is an acquired condition. It is achieved through inservice training programs and other similar techniques that permit the learning of good attitudes toward safety.

The second meaning of integration, and the context in which the word is generally used, relates to the acceptance of home safety activities into the daily work routine of the health department staff members. Integration in this instance is based on the premise that within the normal daily routine of the nurse, the sanitarian, or the health educator, there are opportunities for home safety activities to fit naturally into the performance of the duties to be accomplished.

The following are examples of this type of integration:

1. The sanitarian, while taking a water sample from a home, leaves a home safety leaflet with the householder.

2. The nurse counsels parents on child safety at well baby conferences.

3. The sanitarian distributes Christmas tree safety tags to lots selling trees while on his routine sanitary inspections.

The Community Program

In thinking about the community aspects of home accident prevention, we have felt that there is no one "best" method that can do the job. Instead, we are in agreement that a good community program would involve the application of general principles of community organization. We feel that this would hold true whether the problem is one of juvenile delinquency, chronic disease, or home accident prevention.

It has also been our contention that a home accident prevention program is basically a program directed toward changing attitudes and behaviors. No matter how many of the environmental hazards are found and corrected, if the attitudes are not conducive to safe practices, accidents will continue to happen. Furthermore, since there are so many necessary tools of living which also are potentially dangerous, it would seem that, unless behaviors are changed to accept safe home practices, we could not possibly make

These top national, State, and local officials discussed the home safety program of the City of San Jose's health department in the health department's office. Looking over news clippings of the program are (left to right) Donald Keagy, Regional Office, PHS, DHEW; Gilbert L. Rhodes, chief, Home Safety Project, Calif. Dept. of Pub. Health; Dwight M. Bissell, M.D., San Jose health officer; Ralph Kuhli, asst. dir., Home Safety Div., N.S.C., Chicago, Ill., and O. C. Hopkins, sanitary eng. dir., PHS.

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any progress on the accident problem.

However, before attitudes and behaviors can be changed, there must be an awareness of the problem of home accidents among the people of the community. The responsibility for developing this awareness cannot be left to mass communication media. The accomplishment of this objective is only possible with the mobilization of all forces in the community in a joint effort against home accidents. In turn, this concept means that the agencies which are interested in home accident prevention must be brought together and groups seemingly not interested in the problem made aware of the problem.

The responsibilities of the health department in stimulating a community home safety program are: (1) to provide the necessary stimulus in the development of a community organization for the home safety program; (2) to assist in the coordination of home safety activities undertaken by other community agencies; (3) to provide statistical data and information to community groups; (4) to offer consultation and guidance to community groups in program planning for home safety; and (5) to provide facilities, services, and personnel to work with community groups.

Awareness of the people in the community to the home safety problems and community acceptance of safe home practices was developed: (1) by stimulating community participation in the home safety program; (2) by assisting in the development of inservice training programs for community groups; and (3) by jointly planning with community groups.

Safety Council Relationship.—Whenever possible, already established committees were utilized in the development of home safety activities. In this manner, there was better coordination of agencies and much duplication was avoided. One of these agencies has been the Santa Clara County Chapter of the National Safety Council. Our community has been fortunate in having a local chapter. We are also proud of our very good relationships with the staff of the Safety Council. However, this harmony does not follow apparently for some areas, since we are often asked about the possible conflict of interest between the health department's Home Safety Project and the programs conducted by the Safety Council.

In the light of the overwhelming nature of the accident problem, we have not felt that there is, or needs to be, any conflict. Both agencies are dedicated to reducing the toll of accidents, but there is the realization that in forwarding our activities and in stimulating public support, our agencies need publicity. Both agencies have cooperated fully in attempting to give credit to all groups participating in joint programs.

San Jose State College.—In the 1952-53 Annual Report of the San Jose Health Department, an example of assistance given by San Jose State College was described:

> At the request of a sociology professor at San Jose State College, the Health Education Division was asked to assist in planning a community project for the students. The class decided to conduct a home accident survey within a definite area in San Jose. Assistance was given in planning the organization for the survey, the development of a questionnaire used by the students and in methods of tabulating the results. Discussions were held with the class on the problem of home accident prevention and of the educational aspects of the home accident prevention program in San Jose.
>
> While the results of the survey were of little statistical value, the information proved useful as an educational tool. Since the members of this class were future teachers, the real values of such a program were in the opportunities the student had to work with an official agency in the community and to become involved in a community program. Through class discussions the students had an opportunity to learn what health education materials were of value in community programs and gained some basic education in home accident prevention.

Welfare Department.—In the same report, the activities of the Santa Clara County Welfare Department were described:

> Meetings were arranged for representatives from the Welfare Department and from the Health Department staff to discuss ways in which these agencies could cooperate in the community program. Since each year the Welfare Department contacts over 6,000 persons over 65 years of age and case workers contact a larger number of families, there were many opportunities for home safety education.
>
> Plans for a home safety workshop were developed and early in the fall two workshops, presented by Health Department staff, were held for Welfare Department supervisors and case workers.

The value of this type of project cannot be minimized considering the tremendous financial burden that the Welfare Department bears due to the large number of older recipients who have unnecessary injuries from home accidents. Every case worker should be made to realize how much welfare money could be saved if only one injury annually could be prevented.

Apartment House Owners Association.—Home safety was a new project for members of the association. Their participation in the Home Safety Project branched into other areas of activity in the field of housing. They were helpful in establishing rules and regulations on housing and in revising certain sections of the city code. Their participation in making changes had much to do with their compliance to the regulations.

Conclusions

If the health department is to act as a "catalyst" to bring together the various elements of a community who have an interest in home safety, then it must also develop approaches to further this within its own organization. It is impossible for a sanitation division, a nursing division, or a health education division to carry the load alone. The problems related to home safety are best tackled by a coordinated approach. The sanitation, nursing, and health education divisions have key roles in this approach.

There have been experiments where one health department division assumed all the responsibilities for home accident prevention. This procedure presents the same problem as that of any other single organization in a community working on home safety. Coordination of the various health department divisions with a home safety interest can be achieved by unit planning, cooperative working arrangements, frequent

conferences as to results, agreements as to assignments, and recognition on the part of each as to how his particular division fits into the needs of the other division.

A disadvantage of the coordinated approach to home accident prevention is that it takes more time for conferences and it restricts independence for each division. It is difficult also to view the job which one is doing in its totality. By seeing only the contribution from one division, the total program may be misinterpreted or a particular activity may be thought ineffective when in reality it is not.

Our planning anticipated that home safety could become a part of the public health program on a generalized basis. In keeping with this planning, we eliminated the public health nurse and sanitarian at the end of our first three years, retaining the health educator and the typist-clerk. Although specialized personnel are valuable, particularly in the formative years of a program, they can also become a convenient crutch.

The degree of interest exhibited by staff members in the home safety project depended to a considerable extent on the interest of division chiefs and supervisors. Their interest in turn was very much influenced by the health officer's drive and emphasis on this program. Through administrative staff meetings and division staff meetings, resensitization to the need for home safety activities was accomplished. The use of illustrative material of which we had an abundance was one effective demonstration technique.

Home safety, if properly integrated into a health department, falls into place with such programs as maternal and child health and chronic and communicable disease control. It should be viewed in proper perspective. It would be a mistake to emphasize it out of all proportion to other areas of the health department's program.

In the past we have often received correspondence requesting an outline for developing a community home safety program. Because of our own inadequacies, we have hesitated to give any direct answers to such correspondence. However, at this time, drawing from our own experiences and knowledge built from 5 years of the Home Safety Project, we present the following suggested outline. In presenting this information, we do so with an understanding of the need to adapt programs to local areas and to utilize available local resources.

1. Review mortality statistics for the past 5 years both as to the cause of home accidental deaths and as to the place of accidental deaths among the total deaths for the area.

2. Present to the staff some of the common causes of home accidents and what can be done about the environment in order to prevent them.

3. Ask each staff member to keep a list of home accidents which occur to himself or to persons whom he may visit for the health department during the next week and of ways in which he thinks they might have been prevented.

4. Hold a staff meeting in which members present their findings and in which the whole subject of accident proneness is explored.

5. For staff assignment purposes divide a list of agencies which might be expected to have home accident programs or be interested in having such a program and assign each member of the staff two or three of these agencies. Ask the staff member to interview the executive of this agency to find out if it has a home accident prevention program, if it would be interested in developing this program further, and if it would be interested in sending a representative to a meeting of a community group of representatives of other agencies which are interested in preventing home accidents.

6. Continue the survey by health department staff members of home accident cases and enlist the aid of newspapers, as well as injured persons, in calling attention to accidents and how they might have been prevented. Pictures are always helpful here.

7. Set up a community steering committee on home accident prevention and be sure to include representatives of your chapter of the American Academy of Pediatrics, the Parent-Teacher Association, life insurance agencies, and your local Safety Council or Chapter of the National Safety Council as well as educators.

8. Enlist the aid of private hospitals, physicians, emergency hospitals, and other groups where home injury cases may be taken for care in the reporting of these cases for a period of 1 month to determine the kinds of injuries that people have in your particular community.

9. At the end of 1 month, review the statistics with the community committee. Find out from them what kind of home accident cases they have observed and what they feel should be done about it.

10. Either the whole committee or subcommittees should select certain types of pamphlets and posters to prepare displays in strategic areas.

11. Develop manuals in the nursing division, sanitation division, and health education division to define what each of these fields can do and should be doing in the field of home accident prevention. Work with welfare agencies, particularly those handling old age groups and children, to develop manuals for them. Work with apartment house owners and with insurance agents, particularly those handling casualty insurance. Work with hospital administrators and first aid groups to discover the types of materials and information which they feel could be given to patients who have suffered a home injury.

12. From here the program can fan out into many directions and be maintained on a reasonable level. After an original start is given to the program, quarterly meetings of a community committee should be held in order to bring the committee up-to-date on recent advances in the field of home accident prevention. It should not become an environmental sanitation program, a nursing program, or just a mental health program, but must be a combination of all disciplines of public health as well as of the community. Safety is a way of living and requires continual supportive therapy for everyone who is involved in the field.

ACTIVITIES SHEET NO. 11

MODEL HOMES OF SAFETY

Purpose.—To have local home builders build demonstration homes incorporating safety through built-in, accident-preventing features. Also to encourage rehabilitation of substandard housing including removal of hazardous conditions.

Sponsorship.—The local Home Builders Assoc. (as a representative of the industry), a local newspaper to give publicity to the program, and a local safety council, health department, or other agency to contribute development of realistic safety requirements.

Descriptions of "Homes of Safety" programs conducted in Cincinnati, Ohio, Cleveland, Ohio, and Pittsburgh, Pa., are available on request from the Home Safety Division of the National Safety Council.

HOME BUILDERS are particularly interested in the merchandising aspects of this type of program. In a highly competitive buyers' market they are very cognizant of costs and require justification for additional expenses. For this reason participation by the leading newspapers in the area, to give publicity, and a local safety group, to help develop adequate but realistic safety requirements, is desirable.

Such a program is a natural for a real estate editor. It furnishes him with vast story material for feature articles and a great quantity of home and home product ads.

The local safety group, in addition to helping develop the program, can gain support and publicity for both this project and their activities by conducting a safety suggestion contest.

PROGRAMS

New Home Construction

The committee of sponsoring groups should set up requirements for builders to meet. These requirements, which should exceed various building codes and official specifications, would include:

- Grading, steps and walk design, and illumination outside the home.
- Adequate electric wiring including lighting and grounding facilities for electric appliances.
- Heating plant and hot water installations that exceed minimum requirements.
- Extra storage facilities including lockable cabinets for drugs, power tools, and firearms.
- General floor plan design that includes adequate means of egress, safe stairs, and traffic patterns.

Rehabilitation of Older Homes

Our national housing investment, which is more than 25 percent of our national assets, is wasting away faster than we are building new homes. At the present slow rate, demolition would take 200 years to wipe out the Nation's slums while current adequate housing will wear out over a 125-year cycle. Recently published statistics in a national magazine indicate that nearly 90 percent of our substandard housing is basically OK. The answer to this phase is rehabilitation to meet minimum housing and building codes. Rehabilitation of a home will serve as an impetus to additional activity in this area and ably demonstrate the potential effectiveness of the home-building-industry-sponsored "Operation Home Improvement."

In addition to the organizations sponsoring the New Home Construction program, the following should be included in the rehabilitation program: local building material dealers, finance groups, utilities, real estate groups, public health departments, and fire departments.

Send us your comments and suggestions. Any received by April 15 will be considered in revisions for a reprint of this for distribution.

Sources of information and aid in home rehabilitation include:

ACTION (American Committee to Improve Our Neighborhoods), 2 West 46th Street, New York, N. Y.

Operation Home Improvement, Suite 1109, 10 Rockefeller Plaza, New York 20, N. Y.

Urban Renewal Administration, HHFA, Washington 25, D. C.

USING HEALTH COUNCILS

By James E. Downey, Jr.

Formerly Health Educator
Bureau of Health Education
Division of Health of Missouri
Jefferson City, Mo.

THE SPONTANEOUS GROWTH of local health councils throughout the country has been the most encouraging development in the promotion of public health.* These councils clearly demonstrate the increasing acceptance by citizens everywhere of responsibility for the satisfactory provision of community services required to meet their own, their family's, and their neighbors' health needs.

Today with 34 State health councils and approximately 1,200 local health councils in operation, many persons in all parts of the country are able to contribute advice, recommendations, and a concrete example of what can be accomplished through joint effort.

A health council is basically a banding-together of all voluntary and governmental health agencies, of professional societies such as medical, dental, hospital, and nursing groups, of representatives from such civic organizations as the Lions, Rotary, and Kiwanis Clubs. In addition it includes individuals who represent the public in some special way and can give the health council the points of view of the citizens of the community who will be served. These last are usually called members-at-large.

In essence, these are the people and organizations who make up a council and fashion it into a democratic instrument to bring about better health conditions for the entire community. One of the greatest values of a health council is that it brings together a wide diversity of citizen interests, lay and professional, to concentrate attention on ways to improve health problems.

Home safety concerns the health and welfare of everyone so that a preventative program must be a community effort of organized activity according to a long-range plan. No community home accident prevention program can be truly successful without the cooperation of local organizations such as the health council. While it may not be possible to reach every home and every householder in a home safety program, good coverage will be obtained with full participation by members of the county health council or community health council.

A local health council offers an excellent instrument through which a nonofficial group can be organized since its membership represents a cross section of industry, business, farm groups, and others. This group can take the lead in stimulating the publicity and other promotional activities needed to create public awareness and support of home accident prevention.

Home accident prevention should be an integral part of the activities of every health council engaged in personal environmental health services, school programs, and community health activities. The very nature of the work of health councils with all ages and all groups makes each member a potentially potent force in the prevention of home accidents.

There is evidence that by organizing aggressive accident prevention programs on a community basis, community awareness of accident hazards can be raised to the point where the occurrence of accidents is significantly reduced. The greatest need today, in addition to more basic and applied research in accident prevention, is the accumulation of experience by health departments, health councils, and safety councils in accident prevention activities.

There are practical methods for reducing the number of home accidents. These methods are techniques which the health council applies to phases of preventive medicine. They involve education, recognition and correction of unsafe actions, and environmental hazards.

Safety education takes teamwork, and this can be achieved by the acceptance of responsibility and the working together of health departments, health councils, safety councils, and voluntary health organizations.

Through the use of radio, television, and newspapers, the public can be informed of the facts concerning home accidents. The publicity committee of the health council should be in constant contact with the local newspapers supplying them with all the information on their home safety programs. Plays, skits, and short talks can be given on television and radio.

Cooperation from the schools, civic organizations, and P.T.A.'s can be encouraged in solving the problem of home accidents. Home safety posters and essay contests can be conducted in the public schools. A home accident survey can be carried on in a community over a certain period of time to learn the facts of the how, why, when, and where of home accidents and provide a good home accident prevention educational technique for all involved.

Window displays and exhibits could be utilized at county and State fairs and various health and safety conventions. The use of all media of communication in a long-range, long-term program could be effectively accomplished by a health council.

Our present mode of living makes it mandatory that we eradicate accidental death and disability, just as it is to have children immunized, given vitamins, and checked by a doctor. It must become a disgrace for a community to have a high accidental death rate as it is to have a high death rate from smallpox or typhoid fever. This improved attitude, which requires the acceptance of the fact that because accidents are caused they can be prevented and must be prevented, can be done only through the awareness and enlightenment of the public.

*The above is an abstract of a talk presented October 24, 1956, at the 44th National Safety Congress and Exposition in Chicago, Ill.

Be sure no one is in the target area when practicing archery.

HOME HOBBY HAZARDS

By Charles M. Cameron, Jr., M.D.
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THE DECREASE IN the length of the average work day and the diminishing span of the typical workweek has been one of the phenomena of our modern society.* As the workday has grown shorter, there has been a corresponding growth of timesaving home appliances which has further shortened the time necessary to conduct essential home and personal functions, or "chores" as they have been aptly called.

Commercial interests have been quick to capitalize on America's interest and need for spare-time activities. Budget-priced sports equipment has been offered to the public along with small scale models of technical and scientific equipment which permit one to mould, bake, mix, assemble, blend, preserve, spray, or manufacture all within the confines of one's own garage, basement, or back porch. The hobby shop is a unique institution in 20th century America. It has become the friendly neighborhood provider of supplies and materials which permit one to develop hobby interests in a dozen different fields. Another postwar innovation of America has been the supplying of equipment and materials for the do-it-yourself home handy man or handy-woman.

*This is an abstract of a paper presented at the Community, Home, and Farm Section of the N. C. Statewide Safety Conference, Charlotte, N. C., May 4, 1956.

ACCIDENT MORTALITY AND MORBIDITY

Accidents have emerged as one of the four major health problems of our generation. Without a doubt, heart diseases, cancer, and vascular lesions affecting the central nervous system are first, second, and third in importance, and accidents now rank as the fourth great threat to health and happiness. These statements are based on the numbers of deaths caused by these conditions in this country each year. There is one further unique fact about accidents,

however, and this is in relation to the tremendous number of accidental injuries which occur each year in addition to the deaths. It has been estimated by the National Safety Council that for each accidental death there will occur about 100 accidental injuries serious enough to disable for at least 24 hours. If one adds this tremendous number of injuries to the large number of accidental deaths, one then finds that the total amount of sickness—both fatal and nonfatal — attributable to accidents gives this condition even more claim to a high priority as a major menace to health.

Hazardous Home Hobbies

Even a casual review of the major hobbies Americans practice in and around the home enables one to list approximately a dozen which would seem to present outstanding possibilities for accidental mishaps. This is intended in no wise to discourage the development of these interests or to distract from the pleasure which may be experienced in following these hobbies, but is cited only to stress that any hobby worth developing is worthy of the effort on the part of the hobbyist to practice it safely.

Firearms

Long a popular pastime in America, the ownership of firearms for purposes of hunting or for target shooting perhaps is more prevalent today than at any time in the past. Ample evidence of the dangers of this hobby exists in the two to three thousand accidental firearm deaths in the United States each year. A review of these deaths in North Carolina shows that the majority of deaths from firearms occur, not in the field in search of game or on the target range, but in the home. These seem especially treacherous since from one-fifth to one-fourth of these deaths involve children under 14 years of age. A child's natural curiosity and fascination for weapons, combined with thoughtlessness and carelessness on the part of adults, can and does lead only to tragic consequences.

The Home Workshop

Craftsmanship in a home workshop is one of the most rewarding hobbies an individual can have. Joy of creation, pride of workmanship, and peace of mind all may come from making useful and beautiful things of wood, metal, or plastic. But what wood coffee table or built-in bookcase is worth the loss of a hand, blindness from a flying chip of wood, or other equally tragic accident? The details of safe action in the home workshop are too numerous to mention; vital, however, is the knowledge that there are safe ways of utilizing the excellent tools of today. Recognition that certain safety features built into various tools are for the protection of the user and should be maintained in good working order may avert a serious injury. Attention to such items as lighting, storage of tools and materials, general housekeeping, and precautions against fire are just as important in the home workshop as in a commercial plant or industry.

Do-It-Yourself

The accomplishment of home improvements and home repair of equipment and appliances has tremendous appeal to the homemaker and homeowner of today. This appeals not only to the sense of pride in performance, but also has a very real advantage to all of perhaps a saving of money. Perhaps a bit of humbleness in recognizing when a home repair job is beyond the capabilities of the home repair man would serve to avoid many of these tragic mistakes.

Beginners in horseback riding should learn under the guidance of a competent instructor.

Gardening

The raising of flowers and foodstuffs for pleasure and profit certainly dates back to the beginning of man's habitation on this earth. That modern developments, particularly in agricultural and horticultural chemical aids, enable one to do this now better than ever can be disputed by no one. It can be suggested, however, that the very chemical agents which purge the soils of parasites, rid the plants of bugs and insects, and free them from fungi and molds also have effectively "boobytrapped" the garden, the garage, and the basement. Despite a tremendous effort on the part of the manufacturers, each year there still occur unneeded deaths and mis-

Those using firearms as a hobby for hunting or target practice should handle guns safely. Be sure gun is unloaded and no one is around when gun is being cleaned. It should be stored away unloaded.

haps from the careless and improper use of these agents.

Hazards in Sports

The emphasis on outdoor living, popular in the postwar years, has involved more and more people in active participation in outdoor sports, many of which may be practiced in the backyards of homes or in adjacent fields, vacant lots, parks, and playgrounds. With few exceptions, the hazards associated with these sports activities are such that the accidents sustained fortunately are rarely fatal. This does not mean, however, that many of the broken bones, cuts, lacerations, bruises, and other injuries experienced by children and adults are not preventable. It is significant that most accidents in connection with sports seem to occur, not in organized supervised activities, but in informal neighborhood activities.

Water Sport Hazards

While there are not too many individuals who have swimming pools on the home premises, there are a great number of farm families within North Carolina with one or more farm ponds which serve a recreational function as well as an agricultural one. Many may have to visit a park or recreation area in order to practice one of the several popular water sports which include swimming, diving, boating, canoeing, and sailing. No matter how broad or how narrowly one chooses to define the water sports, paramount in one's mind should be the large potential for a serious accident at any time the uninformed, the careless, or the fool-hardy come in contact with water. Death by drowning is one of the most common types of accidental death in the United States, causing over twice as many deaths as firearms and being outranked only by fires and falls as the major type of nontransport accident.

Conclusions

There are numerous other hobbies which could be mentioned, but these examples have been selected to illustrate that the hobbies with which we fill our leisure hours can be a great variety of activities ranging from the most sedentary to the most athletic and involve a great gamut of human interests. From the accident potential inherent in each of these we can make certain safety suggestions which may pertain to all hobbies.

1. A hobby worth practicing is worth practicing safely. Safety means knowledge in most instances, and the individual practicing a hobby or activity must be adequately informed about the safeguards which he should observe.

2. If you don't know, find out before learning the hard way.

3. Of considerable importance is obtaining the proper supplies and equipment with which to practice one's chosen hobby.

There is now no doubt that accidents follow in our footsteps throughout our lives. Neither is there any longer any doubt about the variety of accidents to which the human organism may fall prey. It is no longer enough to think in terms of safety at home, safety on the highway, or safety in the factory — the need now is for safety-conscious individuals who recognize in accidents one of the most potent threats to individual health and welfare. In this achievement we may expect to find that America's growing hours of leisure will be free from needless accidental injuries and deaths.

Left, do-it-yourself home repair hobbyists should exercise such safety precautions as using a sturdy ladder to reach high places. Right, gardeners, when using garden insecticides and fumigants, should be sure young children are where they can't inhale spray. Poisons should be stored out of the reach of young children.

Not real.

Not real.

BACKYARD SWIMMING POOLS

By Paul R. Young
Director
Home Safety Division
Greater Los Angeles Chapter
National Safety Council
Los Angeles, Calif.

Top, a letter to pool owners; center, a checklist on swimming pool safety which was printed on the back of the letter; bottom, instructions on artificial respiration. These materials were distributed by the Greater Los Angeles Chapter, N.S.C., and the Associated Swimming Pool Contractors to pool owners in the Los Angeles, Calif., area.

THE PROBLEMS involved in the privately owned so-called backyard swimming pools in the Los Angeles area in California are not insolvable. However, with approximately 10,000 of these swimming pools and a potential increase of 3,500 each year, we felt that some type of control at this time would be most applicable.

The Associated Swimming Pool Contractors (an organization composed of most of the swimming pool builders, material organizations, and service companies) and the Los Angeles Chapter of the American Red Cross were the two agencies, together with the Greater Los Angeles Chapter of the National Safety Council, who felt that one of the best approaches to a potential problem would be through some type of direct family educational program. Thus the development was arrived at of an attractive envelope which contained two hard-back cards with the following messages:

1. Letter of congratulations to the pool owner on having a pool built.
2. Suggested safety ideas around a pool.
3. Instructions on the back-pressure, arm-lift method of artificial respiration as recommended by the American National Red Cross.
4. The recommendation to post the above data near the pool where it can be seen by everyone.

The bulk of distribution for this material was accomplished through the pool service organizations; however direct mailing was made to anyone in need of this data.

The availability of 10,000 of these charts to start might not have been possible without the coordination of the Associated Swimming Pool Contractors, the Los Angeles Chapter of the American National Red Cross, and the Greater Los Angeles Chapter of the National Safety Council.

Commercial Studios

Group teaching. Miss Elizabeth Linquest uses the safety peg board to show Mrs. Wendell Troyer how to substitute home hazards with safety items.

A Safe Home... Happy Children

By Miss Elizabeth Linquest, R.N.

Miss Elizabeth Linquest is one of the public health supervising nurses in the City of Oakland's Department of Public Health. Her public health education was at the University of California at Berkeley. She has been actively interested in safety education for several years and serves as a member on several safety committees.

THE HOME SHOULD be the happiest, safest place in the world; instead, one-third of all accidents occur there.* Accidents do not just "happen," there is a cause and a reason for every accident.

The first step in making the home a safer place for your children is to study the leading causes of home accidents involving children. The most common ones are:

1. Burns, explosions—from matches, fire crackers, bonfires, lighters, unprotected heaters and stoves.
2. Scalding—from hot liquids.
3. Falls—from swings, trees, etc.
4. Electrocutions and/or burns—from worn extension cords, unprotected electric outlets.
5. Cuts—from knives, scissors, other sharp objects, workshop tools.
6. Drowning—in bath tubs, unguarded and unprotected swimming pools or uncovered wells.
7. Poisoning—ingestion of household bleaches, detergents, pesticides and medicines. Aspirin, taken in large amounts, is very dangerous.
8. Strangulations—from stuffing small objects in nose and throat.
9. Gunshot wounds—from "unloaded" firearms and/or ammunition.
10. Vehicular accidents—such as child crushed by car backing out of garage, bicycle accidents.
11. Animal bites.

The next step is an inspection tour to uncover and correct or eliminate all hazards possible. Instruct and warn every member of the household about those hazards which cannot be eliminated, and then repeat those warnings periodically. Complete inspections of home and surrounding areas should be repeated frequently, because accident prevention must be a continuous program whether in home, office or shop. The search for safety hazards should be carried out by the entire family group—to the younger children it might be made a game called, "The Hazard Hunt."

The kitchen is the most dangerous place in the home for children, perhaps the inspection should begin there:

1. Teach the children to stay away from the stove and be conscious of their safety as you prepare meals.
2. Turn pot handles in over stove so toddlers cannot reach up and pull pans over, scalding themselves.
3. Household bleaches, detergents, insecticides, should be stored in cupboards well out of reach of small children; not under kitchen sink.
4. Matches should be kept in metal containers out of reach of children.
5. Avoid dangling cords from electric appliances; keep cords out of reach of children.
6. Sharp knives, scissors must be kept in safe place.

*This article has been reprinted from *Oakland's Health*, vol. 11, No. 8, pp. 2-3, August 1956, published by the Department of Public Health, Oakland, Calif.

7. Wipe up spilled water or grease immediately to prevent falls. Pick up fruit peeling for same reason.

In the bathroom:

1. Place medicine in cabinets out of reach of children or keep medicine cupboard locked and key available only to adult members of family. Discard medicines properly—flush down toilet. Do not place in garbage can where children can get them.

2. Discard razor blades in proper container immediately.

3. Keep soap in container when not in use.

4. Have hand rail near bathtub.

5. Never leave a small child unattended in bathtub.

6. Do not use electric heaters, radios or other electrical appliances in bathroom.

Develop an awareness of such common hazards as:

1. Worn extension cords. Replace or repair and put away when not in use. Children can be seriously burned by chewing on cords.

2. Stairway hazards. Use banisters and keep stair treads or carpets in repair. Do not allow toys or other articles to be left on stairs where someone may trip and fall over them. Painting edge of steps with 1-inch strip of light-colored paint helps prevent falls.

3. Toys. Avoid wooden toys that splinter; toys with sharp points which could cause serious injury if child fell; toys with small removable parts that child can take off and swallow. Lead paint used on baby's chair or crib is dangerous. Child may suck on some part of the furniture and be poisoned.

4. Incinerators. Comply with local regulations regarding rubbish burning. Have incinerator in safe place, and hose available. Never leave fires unattended, and be sure fire is extinguished before leaving.

5. Garage and driveway hazards. Keep child in view as you back car out of garage, or take child in car with you, being sure car doors are securely locked.

6. Play areas. The best play area is a fenced yard. Driveways, the street and highways are not safe places for your child to play. Children forget to be cautious when busy playing. When space is limited try making arrangements with a neighbor for use of their yard. A schoolyard or a park may be nearby where children can play under supervision of an adult.

The education of children in safe habits of work and play is extremely important and this training and education must begin early. Children imitate others: you must do what you expect your child to do. Do not jaywalk and then expect your child to walk in the pedestrian lane. The safety habits children acquire from parents in their own homes will help them live safely throughout their lives.

The responsibility of accident prevention in the home rests largely upon the parents, but children will share this responsibility with proper instruction and guidance.

EFFECT OF ORAL DOSES OF DDT

By Wayland J. Hayes, Jr., M.D., William F. Durham, Ph.D., and Cipriano Cueto, Jr., B.S., Savannah, Ga.

WITH FULL KNOWLEDGE of the plan of the study and with complete freedom to withdraw at any time[1], 51 men volunteered to take daily, oral doses of DDT[2] for different intervals. One-third of the men received no DDT except that in the ordinary diet; one-third received 3.5 mg. per man per day; and one-third received 35 mg. per man per day, which is about 200 times the daily rate at which an average man receives DDT from his diet. During the entire study, no volunteer complained of any symptom or showed, by the tests used, any sign of illness that did not have an easily recognized cause clearly unrelated to exposure to DDT.

The storage of DDT in man is proportional to dosage. There was an unexplained difference in the storage of recrystallized and of technical DDT. The pure material was stored in fat at an average concentration of 340 ppm and the technical material at an average concentration of 234 ppm after an identical dosage of 35 mg. per man per day. It appears that, at the dosages used, human males achieve maximum storage of DDT in about a year and thereafter store no more of the material despite continued intake. Men who ate DDT showed an absolute increase in the storage of DDE[3]. No conclusion could be reached regarding the time at which equilibrium is reached in the storage of DDE. The storage of DDT and the storage of DDE show about the same relative variation (coefficient of variation) at different dosage levels, but the absolute variation is, of course, greater at higher dosages.

A method for determining the concentration of DDA[4] in urine was perfected during the course of the study. The excretion of DDA is proportional to the dosage of DDT. This makes possible an objective measurement of DDT absorption by the determination of DDA in urine and greatly expands the possibility of practical study of formulators and others who have occupational exposure to DDT. It was possible to account for about 20% of the DDT administered, in terms of DDA excreted in the urine. The results indicate that a large safety factor is associated with DDT as it now occurs in the general diet.

[1]The above is the "Summary and Conclusions" of an article, "The Effect of Known Repeated Oral Doses of Chlorophenothane (DDT) in Man," by Wayland J. Hayes, Jr., M.D., William F. Durham, Ph.D., and Cipriano Cueto, Jr., B.S., Savannah, Ga., published as a Report to the Council on Pharmacy and Chemistry by the Committee on Pesticides. This excerpt has been reprinted from the *Journal of the American Medical Association*, vol. 162, No. 9, pp. 890-897, Oct. 27, 1956, published by the American Medical Association, Chicago, Ill.

[2]Chlorophenothane.

[3]1,1-dichloro-2,2-bis (*p*-chlorophenyl) ethylene.

[4]bis (*p*-chlorophenyl) acetic acid.

Infant and Child Safety

By Miss June Grommes, R.N.

CONSTANT PARENTAL vigilance and a true knowledge of the ways of small children are the answers to one of society's never-ending accident problems—child safety.*

Statistics show that 85 per cent of all childhood accidents in Wisconsin are caused by automobiles, water, fire, poisons, and falls.

Studies indicate that certain types of accidents are more likely to occur at one stage of development than at another. When they know that each child develops at a different rate, parents become aware of their own child's development and behavior. Being aware of these patterns they are warned to foresee and therefore prevent accident situations.

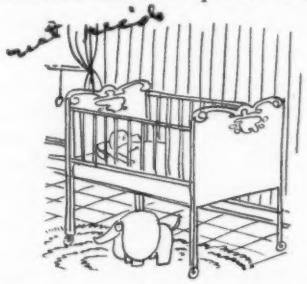
Young children need to touch, to feel, and to explore and therefore should NOT be left unsupervised except in safely planned play areas. Children should have planned outlets for their energy and not have to go into risky situations to get attention. It is important to remember that children imitate adults; consequently, it is imperative that parents and other adults conform to high safety standards.

Behavior patterns of children vary at different age levels.

Birth to six months:

1. They are completely helpless and need constant protection. They begin to roll, turn, and move about; *crib sides must be up at all times. Babies should never be left on anything from which they might fall.*

2. They begin to suck on toys, crib slats and other painted objects.



When refinishing furniture, paint that does not contain lead should be used.

12 to 15 months:

1. They want to roam all over the house. *Gates at the head and foot of stairways will prevent many falls.*

2. They will be exploring with their index fingers. *Unused light sockets should be taped or capped.*

3. THEY PUT PRACTICALLY EVERYTHING IN THEIR MOUTHS. *Poisons, medicines, pins, buttons, needles,*

and other small objects should be put away—in a locked cupboard, if necessary.

4. THEY ARE CURIOUS ABOUT EVERYTHING AROUND THEM, ESPECIALLY THINGS HIGHER THAN THEIR EYE LEVEL. *Satisfy their curiosity by allowing them to see above their eye level. Keep food in the middle of the table and pot handles out of their reach.*

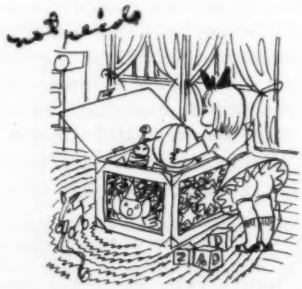
About 2 years:

1. At this age they are maturing and showing independence, but need a watchful eye. *They can open doors; doors leading to danger SHOULD BE LOCKED.*

2. They like to take things apart and fit them together again and experiment with their use. *Keep household appliances and utensils in a safe place.*

3. They begin to climb. *Windows should be protected and car doors locked.*

4. They like to play in and with water. *Any water areas should be fenced in or covered. Supervision in this area is absolutely essential in all younger age groups.*



About 3 years:

1. Three year olds are more self assured. They enjoy playing with

*This article is reprinted from *Health*, vol. 13, No. 8, pp. 34-36, Oct.-Nov.-Dec. 1956, published by the Wisconsin State Board of Health, Madison, Wis.

Miss Grommes is city school nurse doing a generalized community program in Monroe, Wis. A graduate of St. Joseph Mercy Hospital, Aurora, Ill., she has attended the universities of Minnesota and Wisconsin. She was formerly assistant county nurse in Kenosha, Wis.

other children. *Their toys should be strong and well built for rough group play.*

2. They can take directions and run errands, but there is a limit to what they can be expected to do. *They CAN understand safety measures such as keeping the floor clear of their toys.*

About 4 years:

1. These children are very active and into many activities. *They can*

ride a tricycle and should be taught to ride on the sidewalk and watch for cars in driveways.

2. They learn to throw and catch balls. *They should have safe play areas, again away from the street or driveway.*

3. They will be climbing fences and trees, a dangerous continual activity at ANY age, especially four.

Learning safety is a continual process and must be constantly taught. The responsibility for their children's safety is essentially the parents' and remains theirs even after the child begins school.

The schools, too, should take an active part in accident prevention through classroom teaching at each grade level. This can be done through films, projects, and integrating safety with other subjects.

Child safety is then everyone's responsibility, but it must certainly start in the home.

Home Accidents Interest British Parliamentary Group

JULY 10TH, 1956, marks an extremely important event in the history of the Home Safety movement; the setting up of an all-Party Parliamentary group to study the problem of accidents in the home. An appeal was made by Mrs. Jean Mann, M. P. for Coatbridge and Airdrie, and Mrs. Patricia McLauglin, M.P. for Belfast Central, to all Members of Parliament to help them to launch a national campaign to reduce the terrible toll of death and injury caused by accidents in the home. Following this, a meeting was arranged in the House of Commons in conjunction with the Royal Society for the Prevention of Accidents, of which Mrs. Mann is a Vice-President.

The chair was taken by Mr. Hilary Marquand, a former Minister of Health, and the meeting was first addressed by Mrs. Mann who pointed out the vital need for the public to be made aware of the extent and causes of home accidents, and the need to obtain more comprehensive statistics, particularly of non-fatal accidents.

Sir Howard Roberts, President of the Society, spoke of the increasing number of home accidents, and the urgent need for more local Home Safety Committees, with adequate financial support, all over the country to assist in the work of propaganda and education so vitally needed. He urged M.P.s to give a lead in this matter in their constituencies and to go forward with the proposed Parliamentary group.

Mrs. Eleanor Bradley, Chairman of the National Home Safety Committee paid tribute to the invaluable work of existing local Home Safety Committees and urged the encouragement of the setting up of many more.

Members attending the meeting then asked questions and discussed the points raised, and the meeting ended with the setting up of an all-Party Parliamentary group to study the problems of Home Safety and to give support to the work already being done throughout the country. The group will meet again before the summer Recess, and all those concerned with the problems of advancing the cause of home accident prevention can look forward with confidence to increased support in this highly important work.—"Matters of Moment," *Home Safety Bulletin,* vol. 2, No. 10, p. 1, summer 1956, published by the Royal Society for the Prevention of Accidents, London, England.

WHO Group Discusses Accidents

THE WORLD HEALTH Organisation Advisory Group on the Prevention of Accidents in Childhood, meeting in Geneva, took as the theme for discussion "Accident facts as a basis for prevention". Some of the facts studied showed that lack of playing grounds for children in cities, and general overcrowding, often force children to play in the streets where many are hurt. Germany, Great Britain and Holland are three countries where this danger is particularly great.

In the home, poisoning accidents are frequent in many countries, and it was considered that risks would be reduced if the wrapping of dangerous substances gave a clear warning of danger, naming the poison involved, and possibly the correct antidote to employ in case of accident. Causes of poisoning accidents mentioned included moth balls and insecticide (Norway), unlabelled medicines (Great Britain) and chewing cigarette butts (Sweden). The latter are attributed to the lack of open fires for the frequent disposal of cigarette ends, and the fashion for very low occasional tables which allow small children access to ashtrays. In Great Britain the unguarded open coal fire is still the greatest source of danger, coupled with the wearing of loosely fitting nightdresses.

Drowning accidents are particularly prevalent in Finland, Sweden and the Netherlands, where children are often near lakes, canals and the sea. Many of these fatalities happen to children of preschool age as all schoolchildren are taught to swim at school.—"Matters of Moment," *Home Safety Bulletin,* vol. 2, No. 10, p. 2, summer 1956, published by the Royal Society for the Prevention of Accidents, London, England.

HOME SAFETY IN TENANTS' HANDBOOKS

WORCESTER HOME Safety Committee. . . . Two more Councils have included a page of Home Safety Hints when reprinting tenants' handbooks, and the Director of Education has included a page on Home Safety in the Youth Handbook.—"On the Home Front," *Home Safety Bulletin,* vol. 2, No. 10, p. 4, summer 1956, published by the Royal Society for the Prevention of Accidents, London, England.

HOME SAFETY GUIDE for Public Health Nurses

FORWARD

As we continue to progress in our efforts to reduce disability and premature loss of life from the chronic and communicable diseases, the problem of accident prevention becomes increasingly important.* Preventable accidents now rank as the leading cause of death among our children and young adults, and as one of the five leading causes for all age groups in Oregon.

Because of their many community contacts, public health nurses enjoy a unique opportunity to carry practical suggestions for accident prevention directly into the home. I am pleased to recommend this booklet as a guide for the integration of safety education into your daily program, and I am confident that your assistance will aid materially in the improvement of Oregon's present shameful accident record.

—Harold M. Erickson, M.D.
State Health Officer

INTRODUCTION

Home safety education has always been part of the public health nurse's teaching and demonstration activities, even though she may not have labeled it as such.

However, with the evidence that has been gathered during recent years showing that one of the major causes of death and disability is home accidents, it seemed logical that public health workers would tackle this problem as they had many others. They could use the same skills in meeting the challenge of home accident prevention they had used and are using in producing changes in attitude and behavior toward any public health problem.

It is our belief that home safety should continue to be part of the nurse's everyday activities with one change—that there be an increased emphasis on prevention based on the nurse's expanding knowledge of the problem.

The willingness of public health nurses to take leadership in the prevention of death and injury due to accidents in the home is evidenced by the fact that they requested a practical guide to help them know the problem and what they might do about it. . . .

The committee decided to limit the guide to areas in which the *majority of nursing time* is spent in Oregon, based on the results of a questionnaire sent to the supervising nurse or the nurse alone in each health department. The guide concentrates on three age groups and on clinics (those dealing with children such as well-child supervision, crippled children, speech and preschool parties are the ones most frequently conducted by health departments in Oregon), meetings and resource materials. Young adults will be the ones to carry out good home safety practices and so will benefit also from their efforts to save youngsters and oldsters.

The guide is designed so that additions can be made easily when the need arises. . . .

THE PROBLEM

Accidents are the fourth cause of death in Oregon. If the four leading causes are viewed from the standpoint of the average number of expected years of life lost, accidents far outnumber the others and become the number one problem.

Accidents are the first cause of death in all ages 1 through 44.

Home accidents are a major cause of death in Oregon, accounting for 25% of all accidental deaths. A comparison of deaths and injuries from various types of accidents in Oregon for the five years, 1950-1954, is as follows:

Type of accident	% Fatalities
Motor vehicle	39.1
Home	24.8
Occupational	17.1
Public	17.2
Unspecified	1.8
Total	100.0

Type of accident	% Estimated injuries causing permanent or temporary total disability
Motor vehicle	13.7
Home	38.2
Occupational	26.1
Public	22.0
Unspecified	. . .
Total	100.0

Principal causes of *home* accident fatalities in Oregon in 1955 by age group were:

Under 1 year	Suffocation
1 to 4 years	Burns
5 to 14 years	Burns
15 to 24 years	Burns
25 to 44 years	Burns and poisoning
45 to 64 years	Falls, burns and poisoning
65+	Falls

The cost of home accidents to the people of Oregon in 1955 was approximately $6,500,000, which is a minimum estimate and includes only lost wages, medical expense and the overhead cost of insurance. It does not include property damage, of which fire losses alone totalled more than $4,200,000.

Loss of wages and hospital and/or physician's care involved in home accidents is of major importance to the average income as well as to the low-income family. Because of this, the prevention of home accidents among both groups might assume a

*The above article consists of excerpts from the *Home Safety Guide for Public Health Nurses* published by the Oregon State Board of Health, Portland, Oreg. The excerpts have been selected to emphasize preschool child safety.

primary role in the public health nurse's contact with the family. She might also orient other persons (such as social workers) who work with low-income families as to the magnitude of the home accident problem and how they can help reduce the fatality and injury toll as well as the cost to their agency and clients.

PRE-SCHOOL

Major problems in this age group in Oregon are:

Burns and Scalds — This means that the kitchen, which is used so often as a play area for the young child, is a dangerous place. The child, in his dependence, wants to be near his mother and she, in her anxiety, wants it, too. On the other hand, the child also has a need to be free to come and go as he pleases if his normal curiosity is to be appeased.

The mother, who is busy preparing meals or doing other chores, cannot give full attention to the child's activities. Children move so quickly that they may be burned or scalded before the mother realizes the child is in danger. In the Josephine County home accident survey, 26% of the burns occurring in the kitchen were to children under 5. From 1952-1954 in Oregon, 34 children under 5 died from burns, an estimated 7,000 suffered a disabling burn injury and an estimated 136 were permanently crippled.

Danger Spots	Activity Involved
Stove	Pulling pans of hot substance off stove, climbing to stove top and falling against burners
Electrical (heating and cooking) appliances	Pulling dangling cords
Matches, lighters and fireplaces	Striking and burning matches, catching clothing on fire, pouring kerosene on fire (imitating parents), crawling into open fireplace
Space heaters, floor grill	Standing too close to heater, crawling or falling onto floor grill
Toys with small removable parts and sharp edges	Swallowing or choking on small objects
Unprotected wells, ponds, cisterns	Playing near and falling into wells and ponds
Poisons (medicines, bleach, pesticides)	Stored in reach of children, stored in unlabeled containers

Other dangers to this age group are:

Drowning—This is one of the major causes of death among children of all ages in Oregon.

Poisoning—In Oregon, most of the poisoning deaths are from carbon monoxide; however, many children may drink or eat medicines, bleaches and other poisons and not die.

Farm Machinery—Many parents allow youngsters to ride on the tractor, plow and cultivator. Tragic deaths and cripplings have resulted from this unsafe practice.

Examples

4-year-old Karen was critically burned when an electric heater caught her flannel nightgown afire. She will require plastic surgery on her arms and face.

4-year-old Terry set his clothing on fire while playing with matches. He suffered burns on 45% of his body and has already had five skin graft operations.

2½-year-old Mark, out of his mother's sight for only a few minutes, was found in a neighbor's 18-inch deep fish pond.

9-month-old Kathy and 2-year-old Keith playfully splashed each other with gasoline and then burned to death as the fumes ignited.

3-month-old Amanda died from burns over most of her body when a pan of hot water was accidentally spilled on her.

8-month-old Ervin died from choking on a toy rattle.

4½-year-old Anna Mae fell into a trash fire and suffered severe burns to most of her body. Her mother was in a near-by field.

5-month-old Charles died from burns suffered while being "steamed" with vapor from a coffee can on a hot plate. The crib blanket caught fire. The mother was in the other room.

2-year-old Virgil fell from a tractor on which he was riding with his grandfather and was crushed.

Prevention

100% protection of *infant* by providing a safe area where he can be left unattended.

At about one year of age, along with continued protection, gradual education can begin. Children, to be able to protect themselves, must learn the concept of "hot" and the safe use of matches. Only parents can teach these.

Self-control and caution are learned when a sense of trust, autonomy and initiative are established. However, if the parents' anxiety delays teaching, the anxiety may be transferred to the child, increasing his curiosity and frustration. This may push him into the very situation the parents are trying to avoid and for which he is unprepared.

Imitation also is important to the learning of the pre-schooler; he will imitate bad safety habits as well as good ones. One good safety habit to develop is to have a safe place for dangerous things such as poisons, medicines, sharp tools, needles and pins. And, of course, keep the things there when not in use.

What Can the Public Health Nurse Do?

OBSERVE potential hazards such as matches or lighters within reach of child, electrical appliances with cords dangling, pans in dangerous position on stove, children playing unsupervised in kitchen or near fireplaces and stoves, toys with small removable parts or sharp edges, etc.

ENCOURAGE removal of hazard and discuss methods of teaching child. The nurse might also give information regarding safety habits of adults such as smoking in bed, misuse of heating equipment, kerosene on fires, and other practices since many children die in fires caused by

adult carelessness. The nurse also is in a good position to talk about safe toys and the danger of using paint which might contain lead when re-painting toys or children's furniture.

Resources

Three excellent pamphlets are available which will help the nurse know what to talk about with parents in preventing child accidents (these may also be left with the parent). See the section on TOOLS for availability.

1. *Your Child's Safety,* Harry F. Dietrich, M.D., 23 pp. Excellent information and well presented.

2. *Child Safety,* 6 pp. Stresses development patterns and safety precautions for children up to 5 years of age.

3. *Too Young to Burn—how to teach your child about fire,* Harry F. Dietrich, M.D. Emphasizes a common sense approach to teaching safety to the pre-school child. . . .

CLINICS

Clinics and conferences are providing an increasing opportunity to talk with and supply information regarding health to parents. Since the primary objective of most conferences is to *prevent* certain unnecessary things from happening to children, home safety is an important part of the prevention education.

What Can the Public Health Nurse Do?

PROVIDE a safe environment for children in the clinic waiting room. Toys that are available should be safe ones—avoid small toys with removable parts that may be swallowed, ones with sharp or rough edges, stuffed animals with glass or button eyes. If toys are repainted, be sure the paint doesn't contain lead.

INTERPRET major home accident problems to parents during interviews, conferences or informal discussions.

DISCUSS with parents ways in which children can be taught safety habits without an excessive use of "don'ts." Suggest ways of substituting without injecting unnecessary fear which is contagious. Some fear, however, is healthy and protective.

Volunteers, with only a minimum of orientation, can do a good job in safety education as they talk with parents in the clinic. Accident prevention does not require technical knowledge. It is based on common sense. The only real accident prevention expert is the person who has had a serious accident.

VISUAL AIDS

EXHIBITS — Several portable exhibits are available from the state board of health for short term use. The nurse may wish to produce her own exhibits to be used continuously. They can be simple and inexpensive. Exhibits should convey only one idea at a time; for instance: safe toys; burns from matches, stoves, electrical appliances, etc.; medicines; under the sink poisons. Some of the safety pamphlets will offer possibilities for exhibit material. It is usually possible to find someone who is handy with carpenter's tools to make a portable exhibit background of beaverboard or similar material to which posters and other items can be attached easily with colored map pins, tacks or rubber-base glue.

MOVIES—If facilities are available to show a film, the nurse might consider having a short educational program either before or after the conference. Or, if possible, she may have a continuous film showing in a separate room during the conference. One of the volunteers, or the nurse herself, could be prepared to emphasize important points in the film and answer questions. A preview of the film is important for the person responsible for the discussion.

POSTERS AND BULLETIN BOARDS—A little imagination,, some colored paper and paste can produce excellent educational materials for bulletin boards.

DEMONSTRATIONS — Nurses have learned through their own experience that demonstrations are an effective teaching tool. Examples are: baby's bath, giving medications, home care of the sick and so forth. Home safety lends itself well to demonstrations such as safe and unsafe toys, labeling medicines, safe handling of knives and many others. Where there is a captive audience, the nurse or the volunteer could put on short demonstrations. A good resource is "Getting Down to Brass Tacks," which is described in the section on Tools.

OTHER—"Little Songs for Living Longer" (seven short, catchy tunes) could be played at intervals or continuously during clinics.

MEETINGS

Although the nurse's contact with people through meetings is usually a "one-shot" affair, it, nevertheless, gives her an opportunity to teach the audience something about health. Many times the subject assigned is "all about health". If the nurse is allowed any choice, she could choose home safety.

What Can the Public Health Nurse Do?

INTERPRET to the audience that home accidents are one of the major problems of any community and of any age group.

INVOLVE the audience in the discussion by asking questions, such as, "What do you think . . . ?" and "Has this ever happened to someone you know?" or "How did you handle the situation?" Relate the problem to them by using personal experiences, newspaper clippings, case studies as examples. The nurse could ask the audience for safety suggestions that have worked in their homes.

SUGGEST possible solutions such as *individual* action (a place for everything and everything in its place, using equipment properly, providing protection for the very young and very old, teaching safety habits) and *group* action (clean-up campaigns, swimming classes, home fire inspection, baby sitting classes).

Meetings with Parent Groups

. . . Materials which might be used [are suggested in a] section on Tools.

INVOLVING HEALTH DEPARTMENT STAFF IN HOME ACCIDENT PREVENTION

By Harold E. Samuelson

Health Educator
Grand Rapids Health Department
Grand Rapids, Mich.

PUBLIC HEALTH WORKERS have long known that home accidents are a leading cause of injury and death.* However, many have been reluctant to introduce home accident prevention into the public health program because there has been little evidence as to whether or not the technique used so satisfactorily in controlling and preventing disease would be equally successful against accidents. Such evidence (beginning in 1949 with a 5-year study in the Kalamazoo City-County Health Department in Michigan) is now accumulating.

Assuming that the team approach is a good approach, the problem, "How do we involve the health department staff in home accident prevention activities?" still remains in most health departments. Interesting a health department staff to participate actively in a home safety program is seldom accomplished in a short time. Usually it is a very slow process. The basis for the active participation of a local health department may be summarized in the following important steps:

The basis for a first step usually involves an inservice training program. An inservice education program will, in most cases, involve (1) a review of factual information on home accidents and (2) a workshop situation in which the various staff disciplines attempt to find ways to incorporate home safety into their regular activities.

A second basic step is the formation of a home safety committee comprised of representatives from the various divisions. Regular meetings of this committee and subsequent reports to the entire staff aid in the development of the staff's awareness to their responsibilities in this field.

A third, and perhaps the most important, step is the actual development of specific home accident activities in the various divisions and among individual staff members. Methods by which health department staff members can be involved in various home safety activities are as follows:

1. Statistical Analysis of Home Fatalities.—A statistical analysis of home fatalities for the most recent 5- or 10-year period can be made an educational experience for the vital statistics staff. In addition, reliable statistics, if distributed to other staff members, can be most useful in pointing up the problems. Detailed information on home fatalities is necessary for proper program planning, controlling, and evaluation.

2. Safety Emphasis in New Codes and Regulations.—A golden opportunity to incorporate home safety into new codes and regulations is afforded sanitary engineers and sanitarians. This is particularly true in the development of housing and building codes where much emphasis can be placed on the elimination of environmental hazards.

3. Collection of Data on Nonfatal Home Injuries.—Data can be obtained from (a) hospital emergency rooms and (b) public health nurse home visits. The collection and reporting of data pertaining to the thousands of nonfatal home injuries, as well as other unusual home accident situations, not only serves an educational purpose, but also materially aids in maintaining staff interest.

4. Provision for Recording Home Safety Work in Activities Reported.—Nearly all staff members record daily activities in some organized manner. Provision in such a form to record home accident prevention activities regardless of their scope has a way of pointing up individual responsibilities in the field of home safety.

5. Scheduling Home Safety Programs for Staff Conferences.—Most health department staffs meet at regular intervals throughout the year. Sessions on home safety tend to highlight the problem and afford an opportunity to discuss anew the various aspects of the problem.

6. Use of Educational Tools and Techniques.—Staff members should be encouraged not only to develop new and practical educational devices, but to use such existing time-tested materials as pamphlets and posters, exhibits, home safety calendars, and checklists. Investigations should be made regarding the use of newer gadgets such as "do-it-yourself home safety parties" and the like. In addition, staff members should be encouraged to participate in radio and television programs, school safety programs, and a host of other communitywide safety programs.

Home accident prevention is a stimulating challenge to every health worker. The responsibility for the effective reduction of home accidents rests with the health department and is shared equally by every member of the team. If health departments exercise the leadership which they have demonstrated so effectively throughout the years, they can help save many lives now being sacrificed to avoidable accidents.

*The above is an address presented at the 44th National Safety Congress and Exposition, October 24, 1956, in Chicago, Ill.

Sanitarians and Safety

HEALTH COMMISSIONER Harvey Gates began spreading newspaper clippings out on the table before him.* The four Ball County sanitarians attending the staff conference watched him with mounting curiosity.

"Boys," said the commissioner when the clippings had been laid out, "my week in town gave me time to catch up on my newspapers. I'm disturbed by what I read."

He settled his long legs more comfortably and continued: "Almost every day the papers carried a story of an accident. These are some of the clippings I saved; let me read just a few of the headlines: CHILD, 3, FALLS INTO OPEN WELL . . . SCHOOL FIRE INJURES 7 . . . POOLSIDE FALL CLAIMS YOUTH . . . BARN IS SCENE OF ACCIDENTAL SHOOTING.

"These or accidents like them could happen here. What shall we do to prevent them . . . start a safety program? What do you think?"

Watson Springer, in charge of school sanitation, was the first to speak. "I don't see how we can start another program with our present staff. Of course, as a sanitarian, I'm always on the lookout for unsafe conditions."

"We all are," put in Jack Husch, who checks the local swimming pools and trailer parks. "Let's each outline some of our day-to-day safety checkups. Maybe from there we can decide on improvements."

"Good idea," nodded Dr. Gates. "Wat, suppose you start us off."

Wat opened a manila folder, drew out a school building inspection form. It bore several handwritten notations.

"Just yesterday I was in the Grubaugh Elementary School," Wat began. "These are some of the safety hazards I noted. Recommended corrections will be in my letter to the principal.

"No fence along west side of playground. Many of the children were running into the street, after a ball or each other. They need a good fence there, six or more feet high.

"Unsuitable playground surface. The play area is bare of grass and has rough, loose stones. It was muddy in places, too. I'm recommending that the area be paved with a bituminous material."

Health Commissioner Gates broke in to inquire, "What about fire hazards, Wat?"

"I have three notes on them, Dr. Gates. For one, *oil being used on some of the floors.* That oil is a fire hazard, of course. Better to have the floors sanded and sealed.

"One of the exit doors locked . . . Fire extinguishers not checked recently. These might not seem important . . . until there's a fire. Then they take on utmost importance. From time to time, school people get careless about such fire precautions. When they do, I remind them of the famous Collinwood School blaze that took 173 lives back in 1908."

"And keep reminding them!" said Dr. Gates, bringing his fist to the table. "Now let's hear from you, Jack. Are you keeping tabs on safety at swimming pools and trailer camps?"

Jack Husch stood up, squared his shoulders, ran a hand through his crew cut. "OK if I put some points on the blackboard? Here are some safety points on the Crystal Pool I called to the attention of the operator a few days ago.

"Much water standing in bathhouse, pool edges. This is a fine way to get a head or arm broken from a fall," Jack said. "Keeping the surface mopped is only stop-gap. Best idea is to even up the floors and walks and refinish them with slip-proof material.

"Showers not protected against scalding. It's tough to mix hot and cold and get the right temperature, especially with a number of bathers drawing water. Hot water sometimes gets up to 175 or 180° F. Practical jokers could easily scald someone. I suggested they change to a central automatic mixing valve to keep water temperature to 120° F. or less.

"Equipment room not locked at all times. One danger here is the chlorine cylinder, of course. A youngster could easily knock connections loose . . . and gas the entire area!

"Lifeguard not on duty at all times. I know from experience that the guard's given other duties. That almost certainly means roughhousing in and around the pool. It's better to have more personnel and save lives.

"Rescue equipment not readily available. Sure, the guard's impor-

*This article has been reprinted from *Ohio's Health*, vol. 8, No. 1, pp. 13-17, January 1956, published by the Ohio Department of Health, Columbus, Ohio.

tant, but he can't do it all. He needs equipment; hook poles and lifesavers with ropes attached, a telephone nearby, first aid room with cot and blankets, and a first aid kit."

Jack paused to wipe the board clean. "Now for trailer parks," he continued. "Here are some observations I jotted down after going over Cliff Benson's trailer park over at Miggtown.

"Operator not enforcing speed limit in park. On the park streets, ten miles an hour is the top. Hot-rodding is just out! After all, you can't see very far on those streets. And kids don't always jump in time.

"Inadequate street lighting. You can fall over a curb on a trailer park street the same as any other. Besides, well lighted parks mean better operated parks.

"Overhead electrical wiring not securely fastened. The 'hot' wires could be blown down or pulled down. The resulting 'short' could easily cause a fire or electrocute a child. I'm suggesting that better poles be installed.

"These are just a few safety measures I suggest. How about your taking over now, Bill?"

"Yes, Bill," agreed Dr. Gates. "What about some safety problems you run into on dairy farms?"

Blond, husky Bill Dunn went to his desk for a moment, returning

with a large sketch of a dairy barn. "Let me show you some of the danger spots around a dairy barn," he said. "Here's a common one: *an abandoned dug well back of the barn.* Nothing wrong here . . . provided it's filled or capped with masonry. Trouble is, too often the cover is just a few loose boards that can easily break with a person's weight or that even a child can remove.

"Wiring in dairy barn and other farm buildings in bad condition. There's much poor wiring in barns and on farms; fire or electrocution could result. Such wiring should be replaced, of course.

"Oily rags in corner of motor room. These are a fire hazard, too, and should be removed. Many's the time I've run across such conditions.

"Shotgun in corner. Of course, that might be there to take care of the milk sanitarian," he grinned. "But seriously, though, the only place for guns is under lock and key. Even an unloaded gun lying about is dangerous for youngsters might locate shells elsewhere.

"Very low clearance under piping in barn. Low pipes are a hazard to tall people, like Dr. Gates. The pipes

should be raised to seven feet or higher."

"Fine, Bill, fine," said Dr. Gates. "Hank, how about you?"

Henry Rowland, the food service sanitarian, went to the blackboard. He began making quick, deft drawings.

"The incidents I'm about to tell you are real," he laughed. "Only the names have been changed to protect the innocent.

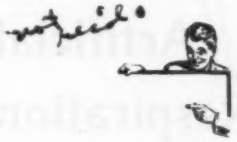
"See anything strange about this sketch? That's right; *no opening in swinging door between kitchen and dining room.* Why an opening? To see if someone's barreling at you from the other direction. Saves many a bump and bruise, not to mention dishes and tempers.

"No guard on meat slicer. Let's face it; there's no market for sliced fingers.

"Poisons and cleaning compounds not stored away from foodstuffs . . . in a locked place. The danger, naturally, is that someone may mistakenly put some of this material into food as it's being prepared . . . and thus contaminate it.

"Loose steps on basement stairs . . . trap door over loading chute unsafe for pedestrians. Falls aren't funny; ask anyone who's experienced one. If he's alive.

"Discarded refrigerator behind building. It should be destroyed, or



the door removed. There's a state law on this now, you know.

"Well, those are just a few of the suggestions. But I've talked long enough."

When Hank had resumed his seat, Dr. Gates sat shuffling and reshuffling the clippings he had brought.

"Boys," he said finally, "I must confess I'm surprised, pleasantly so, by your many safety activities. You're doing something every day, maybe in every visit or conversation, to promote safe practices and precautions. Keep it up. Do more of it as you go along.

"Safety isn't something that we start out one morning to 'do' and come back to the office in the afternoon and say 'mission accomplished.' It's a part of everything we do or do to others, part of living. And working it into our present schedule seems to be a good approach and one that we can handle on our present budget of time, personnel, and money. Keep plugging it."

The four sanitarians sat warming themselves in their superior's approval. Finally Watson Springer spoke: "We surely will, Dr. Gates. Safety is part and parcel of good sanitation. Structures in good repair and good sanitation usually go hand-in-hand, we find."

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For some time the group remained around the table, discussing other ways they could improve safety in Ball County. Their conclusions:

- Using safety leaflets and other educational literature.
- Showing safety films, slides.
- Participating in safety training courses which Dr. Gates volunteered to suggest to the state health department.

New Method of Artificial Respiration

By P. A. Marsteller
Lieutenant Junior Grade, USNR
Service Information Officer
U. S. Naval Air Missile Test Center
Point Mugu, Calif.

ACCORDING TO THE coroner's report the little girl — just six weeks old—died of pneumonia. But pneumonia was just the ultimate cause of her death.

One day, about 3 weeks before she died, the child's father had found her gasping for breath. He applied artificial respiration, the obvious and accepted treatment in such a situation. The infant began to breathe normally again, and the father thought the case ended. But this father, like most other parents, did not realize the dangers of applying the standard method of artificial respiration to small children. He did not know that in reviving the child he had broken six of her fragile ribs. The fractures brought on the case of pneumonia which caused her death.

The coroner's report went on to state that there was no evidence of negligence on the part of the parent. In such cases even experienced operators are unable to determine where dangerous pressures begin or if the efficiency of the method is compromised. In the excitement of an emergency this problem is compounded.

The case cited above is true. It occurred in San Diego, Calif., last May. How many tragedies and near tragedies of this nature occur annually, it is, of course, impossible to estimate. But the case points up a problem medical men have been pondering for years: How to produce artificial respiration in an infant without using elaborate equipment and without injuring the child in the process.

Up until this past year, all methods of resuscitation for infants had simply been adaptations of methods used on adults or methods that were not conducive to safety or efficiency. The gross disproportion between the adult operator and the tiny patient in weight and development had often led to the injury of the child. Or, if the operator was too careful, his pressures might not be sufficient to induce respiration. Simply, these were the horns of the dilemma when a Navy flight surgeon, long interested in the subject, began serious work on the problem and found a solution.

As a youth, Capt. H. J. Rickard, U. S. Navy, was an enthusiastic swimmer and in high school and college participated in many aquatic sports, served as a lifeguard and swimming instructor, and after accepting a commission in the Navy Medical Corps in 1940 saw first hand the need for adequate training in swimming, water safety, and resuscitation for all persons.

Captain Rickard is presently senior and staff medical officer and flight surgeon at the U. S. Naval Air Missile Test Center, Point Mugu, Calif. His method of manual artificial respiration for infants and small children was publicized in the *Journal of the American Medical Association* a year ago in the fall and featured in the April issue of *Modern Medicine*. It has now received further attention from medical men the world over.

The method, termed the Rickard prone tilting-visceral shift, is by far the most efficient, safe, and simple method of artificial respiration yet devised for children up to the age of about 2 years. This age group (1 week to 2 years of age) gets into more serious asphyxial emergencies than any other group throughout the life span.

Its simplicity is perhaps the most attractive feature of the Rickard method. It requires neither special equipment nor practice. Once the basic principle is understood any person can use the method without assistance, material, or equipment and without unusual discomfort or great expenditure of effort.

Simply, the procedure involves the placing of the stricken child astraddle the right forearm, his face to the operator's upturned palm, and then raising and lowering the child to effect resuscitation. The middle finger of the right hand is placed in the child's mouth, depressing the tongue, to provide an unobstructed air passage. Figure 1 shows the positioning of the child on the arm of the operator. The left hand is placed on the child's back with the fingers hooked across the shoulders on either side of the neck. The child may be covered to preserve body temperature which will aid recovery.

The up and down movement of the arm, figure 2, alternately compresses the child's lungs (expiration) and allows them to return to normal position (inspiration) by the gravitational shifting of the viscera. The internal pressures eliminate the need for the external force which, while safe for more mature individuals, frequently crushes the rib cage of an infant.

The tongue of the young patient is drawn forward by the middle finger of the operator, figure 3, to provide the airway while the thumb and other fingers of the hand steady the child's head in a line with his spine, which insures a clear passageway.

Figures 4 and 5 show the positions for expiration and inspiration. The arrows indicate the movement of the viscera against the diaphragm.

After positioning the child on his arm and establishing the airway the operator should stand, keeping the child parallel to the ground. In order to place most of the strain on his shoulders rather than on the weaker forearm the operator should press his upper arm to his side and keep it at a right angle to the ground. The operator may also work in a seated position. The seat should be low and the right elbow should be rested on the right knee.

Artificial respiration must begin immediately. The operator should not even delay to loosen the child's clothing. The procedure should always begin with the downward movement, the expiratory phase, figure 4. This position forces viscera to press against the diaphragm expelling air from the lungs and, in the case of drowning, causes the

draining of water and debris from the stomach and throat.

Then the child is raised to the inspiratory phase, figure 5. This movement causes the viscera to shift in the opposite direction releasing the pressure on the lungs and causing a pull on the diaphragm sucking air into the lungs and completing the cycle.

The movement, both up and down, should be about 45 degrees from the original position, and the complete cycle, up and down, should be performed between 8 and 12 times a minute. Recitation of the phrase, "Out goes the bad air, in comes the good air," will help the operator achieve the correct timing. The whole operation should be performed rhythmically and without interruption until the child begins to breathe without assistance or is pronounced dead.

Dr. Rickard emphasizes the need for immediate action in all cases where a person has ceased to breathe, whether the cause be drowning, shock, electrocution, or asphyxiation. Too often a drowning person is "saved" only to be lost while the person who dragged him from the pool goes for expert help before starting artificial respiration. Minutes lost by a person on the scene at the time of the emergency cannot be regained upon the arrival of the physician, no matter how efficient the equipment or treatment. Even a minimal exchange of air in the early stages of hypoxia (reduced available oxygen) may make the difference between a life saved and tragedy.

From newspapers Dr. Rickard has accumulated a tragic record of death by asphyxiation brightened only slightly by reports of successful rescues. Reading through his file of clippings one cannot help but note that in the vast majority of death cases the person on the scene delayed the application of artificial respiration until the fire department or a doctor arrived. The opposite is true in the happier reports. The conclusion is obvious.

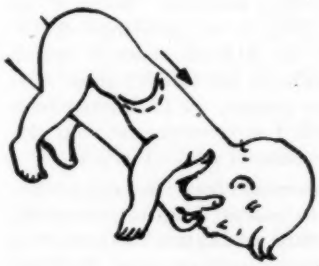
With the swimming pool becoming more and more a part of the American home scene (contractors expect to build 30,000 more pools throughout the Nation this year), water safety becomes increasingly necessary if pool owners and parents of young children are to have peace of mind during the swimming season. Insurance cannot bring back the life lost, and the security provided by pool safety devices is more relative than absolute.

If America is to reduce the 50,000 asphyxiations recorded annually, it will have to be done by the American public.

Figure 1.

Figure 2.

Figure 3.



Expiration.

Figure 4.

Inspiration.

Figure 5.

Council on Pharmacy and Chemistry
Report to the Council*

The Council has authorized publication of the following report from the Committee on Toxicology.

H. D. KAUTZ, M.D., *Secretary*

The following report is a summary of the 1956 annual meeting of the Committee on Toxicology. These proceedings have been digested in order to bring to the medical profession timely reports on subjects that might not otherwise come to the readers' attention. Certain of the more important topics considered and actions taken thereon by the Committee are set forth.

BERNARD E. CONLEY, *Secretary*
Committee on Toxicology

A.M.A. Studies Poisoning Problem

ANNUAL MEETING OF THE COMMITTEE ON TOXICOLOGY

The Committee on Toxicology held its annual meeting on March 29, 1956, at the headquarters of the American Medical Association, Dr. Torald Sollmann, Chairman, presiding. In addition to the Chairman and Secretary, the following members were present: Drs. J. M. Arena, H. B. Haag, A. J. Lehman, E. Press, and Mr. J. C. Ward. In addition to headquarter's representatives, Drs. E. W. Constable, State Chemist, North Carolina; K. P. DuBois, Toxicity Laboratory, University of Chicago; and W. J. Hayes and S. W. Simmons, United States Public Health Service, attended as guests of the Committee.

Abstracted reports of some of the more important discussions and actions follow:

Kerosene Poisoning.—A subcommittee on poisoning by kerosene was appointed to study measures for improved safety in the use of petroleum distillates. Progress was reported on current projects to develop a monograph on kerosene poisoning and to promote precautionary labeling. Proposals for the clinical evaluation of various methods of treatment and laboratory investigation of methods for determining amounts of absorbed kerosene were discussed. The Committee agreed to join the American Academy of Pediatrics and the American Public Health Association in a joint clinical study of the treatment of poisoning by kerosene and petroleum distillate.

Exploitation of Nonprescription Drugs.—During the past year, several instances potentially harmful to the public health, especially that of children, have occurred. Representative situations include promotion of a clown-shaped medicine bottle designed to attract children to the container, promotion of vitamin pills on a children's program in a manner appealing to the toddler's tastes for sweets, and distribution of aspirin by vending machines. Since drugs cause 20% of the accidental deaths (33% in children under 5 years) and 22% of the suicides from nongaseous poisons, the Committee feels compelled to comment on these developments.

Devices intended to tempt children to accept drugs as something other than medication can have only unfortunate consequences. Medicine containers designed as toys tempt the very young to take freely of their contents. Vending machines for the automatic dispensings of aspirin, vitamins, and other nonprescription drugs are subject to the same censure. Such machines operate unattended, and children cannot be expected to discriminate between those that dispense gum and candy and those that dispense drugs. Accordingly, the Committee moved that it be placed on record as against the use of vending machines for drugs in public places accessible to children and others lacking in mature judgment.

Poison: Definition and List.—The Committee has been repeatedly asked to define and enumerate substances that it considers poisonous. To this end, definitions of poison presented in 11 current textbooks on pharmacology and medical jurisprudence submitted by 25 leading pharmacologists and representative legal definitions of 16 national and local government agencies in this country and abroad were collected and examined.

There is no uniformity of legal or scientific opinion as to what constitutes a poison. Various laws, both state and national, vary widely in their definitions. Statutes that employ dosage values vary in their specifications from 5 grains to 5 gm. as the "destructive," "deadly," or "fatal" quantity for "(adult) human life." Those state laws not utilizing a quantitative definition employ vague, indefinite, and generally unsatisfactory terms such as "noxious," "deleterious," or "virulent poisons" to specific chemicals classed as poisons.

Since a precise definition that would fit all circumstances is not possible, the Committee felt that any substance that, when improperly used, may produce harm by chemical action should be provided with an appropriate precautionary label statement. Such precautionary statements should provide warnings for different categories of hazards.

A list of several hundred poisonous substances compiled from legal and trade sources in this country and abroad is also under consideration for adoption.

Public Education About Poisons.—A report of a conference between a Committee representative and school health workers in Richmond, Va., was given regarding means for education of the public about poisons. The school health workers felt that a variety of approaches should be used, such as poster contests on chemical safety and distribution of pamphlets similar to those given away during Fire Prevention Week. They felt that the 30 million school

(to page 31)

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FIRST-CLASS KILLER— Carbon Tetrachloride

By Louis W. Spolyar, M.D.

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FROM ITS OUTWARD appearance, carbon tetrachloride appears to be rather innocuous.* It is a clear, colorless liquid with a somewhat pleasant odor. It will not explode or burn and will do practically any job from removing grease to dissolving various organic solids. It was discovered in 1839 and used to kill hookworms in 1911. Industry used it extensively as a solvent soon after that, but found it too toxic and limited its use to well controlled areas, or discontinued its use. It was not a good anaesthetic because it was too toxic, and for the same reason it was discontinued as a medication in the eradication of hookworms. Its use as a dry hair shampoo was also short-lived because of its toxicity.

Stormy History

With this stormy history it is interesting to find that it still is being used, knowingly or unknowingly, in repair shops, small manufacturing plants, garages and homes. Often it is used unknowingly because it is frequently sold under various trade names and not as carbon tetrachloride. It is true that the container may, in fine print, state that carbon tetrachloride is the chief ingredient. However, from a casual look at the trade name one may not gather that impression.

An agreement was drawn up in 1935 by the U. S. Public Health Service and the manufacturers of carbon tetrachloride, whereby containers of the material would be labeled as follows:

"WARNING! VOLATILE SOLVENT. VAPOR HARMFUL.

"Use with adequate ventilation. Avoid prolonged or repeated breathing of vapor. Avoid prolonged or repeated contact with skin. Do not take internally."

The mildness of this label has been criticized, but it is pointed out that carbon tetrachloride is not dangerous enough to warrant the label POISON according to existing definitions. Technically, it is a "second class" poison merely requiring a warning label.

Eight Indiana Deaths

Although it is a "second class" poison it is highly toxic and may be fatal. Records of the Statistical Division, Indiana State Board of Health, for the three-year period 1950 through 1952, show that carbon tetrachloride has caused eight deaths. Four of these cases drank the liquid and the rest inhaled the fumes. The record of non-fatal illness is not available since this type of illness is not reportable through existing laws.

Carbon tetrachloride poisoning may occur if the fumes are inhaled, or if the material is swallowed. The chief action of this compound, once it gets into the body, is on the kidney and liver. Depending on the amount absorbed, the liver and kidney may be so involved as to cause death within ten days. If the amount absorbed is sub-lethal, then the kidney and liver may regenerate and thus carry on their normal physiological functions with complete recovery of the individual.

The symptoms under such conditions will vary with the amount absorbed, but generally the person complains of nausea, vomiting, abdominal pain, weakness, and headaches. In severe cases the skin will be jaundiced and within a day or two, convulsions may occur and this is followed by cessation of kidney function, and death. The entire episode is made worse if the person is an alcoholic. In the very severe cases, little can be done as to treatment beyond the rare use of a mechanical kidney to save that individual's life.

Use Substitutes

Because of the severity of the disease, carbon tetrachloride should never be used unless satisfactory substitutes cannot be found. If it must be used, efficient mechanical exhaust systems should be installed and then periodically maintained. Such exhaust systems are not used in the home or the small service shop and, therefore, carbon tetrachloride should not be used in these areas. Safer substitute cleaning fluids are available for use in the home or industry. For example, in the cleaning of electric motors it was thought that only carbon tetrachloride could be used. Now safer motor cleaning mixtures have been developed and they do the job as well as carbon tetrachloride did but with a greater margin of safety.

Carbon tetrachloride should never be used unless it is absolutely necessary and then if it must be used, excellent ventilation controls must be developed and used. It may be a "second class" poison by definition, but it is a first-class killer by performance. To be certain you are not using carbon tetrachloride, read the label on the container before purchasing. If you do use it, heed the warnings printed on the label. To borrow a phrase from the auto safety groups, "the life you save may be your own."

*This article has been reprinted from the *Monthly Bulletin*, vol. 58, No. 4, pp. 7-8, October 1956, published by the Indiana State Board of Health, Indianapolis, Ind.

DO 67

Photo by Cy La Tour & Son

A pet's health and safety should be protected.

Health and Safety for YOUR PET

By Diana Henley
Education Department
The American Society for the Prevention of Cruelty to Animals
New York, N. Y.

SAFETY IS important for our pets as well as for the humans with whom they live. To contribute to this safety, here is a simple three-point program: Pick the right pet. Make preparations. Take precautions.

Living with pets in the Education Department of the American Society for the Prevention of Cruelty to Animals in New York, N. Y., keeps me pretty busy. I may be bottle feeding a baby racoon one minute, mixing up a concoction of banana and grapes for a toucan the next minute, and then will settle down to a half hour of training a parrot to say, "Hello."

Not all of us are lucky enough to have contacts with so many different and exotic pets, but most of us do get a yen sooner or later to provide a home for a fluffy kitten or an adorable puppy that we see in the window. Whenever this is feasible, I think it's a wonderful idea. Most homes are immeasurably brightened by the presence of a pet.

But the *type* of pet you choose is dependent on so many factors. Ask yourself why you want a particular animal to share your home. Is it to be a companion for yourself, a playmate for your child, or a guardian of your property?

Consider the size of your home, your manner of living, your neighbors, the age of your children, *and* your landlord. For example, a large, untrained dog can be a real hazard in a tiny apartment. He may wreck the furniture, knock down the baby, and trip up your guests. Friends of mine who own a great Dane were startled when asked to ride in the freight elevator as the mere sight of the huge dog—though gentle and obedience trained — petrified some elderly neighbors.

If you own prize Ming vases or old brocade curtains, a lively, curious kitten is not for you. There are many fascinating animals that are not suited to the average home. Many children, and adults too, would love to own a monkey, but he needs an enormous amount of space, his diet may prove a worry, and his temper grows ever more uncertain with age.

But don't become discouraged. Brightly colored tropical fish, a talkative parakeet, or a perky hamster require relatively little care and may prove just the right answer to *your* pet problem.

Now that you have decided what kind of animal you want, don't relax! Remember that, when you take a dog, a cat, or even a parakeet, you are acquiring a companion who will be with you for many, many years. A little care and foresight now helps to insure that this association will be a happy and healthy one.

Where you obtain your pet is a prime safety factor. For those who want a purebred puppy or kitten, a reputable breeder or kennel is the best choice. If you go to a pet store, do check up on its reputation, and be sure they will give you all papers pertaining to inoculations and registration.

Humane societies such as the ASPCA usually have attractive puppies and kittens available, but of course your chances of finding a purebred dog or cat are not too great.

And if you acquire a waif, please run with it at once to a veterinarian. Too many children's hearts have been broken by the death of the pathetic puppy or kitten whose running nose, watery eyes, and general listlessness were glaring danger signals that should never have been ignored.

A medical check up is a good idea no matter where you have obtained your pet. Find out from your veterinarian when distemper and hepatitis shots should be given, and get the whole story of the worm problem. A little investment now may save a huge medical bill later or the tragic loss of an expensive animal.

If you have never owned a pet before, prime yourself on the basic essentials of good care. It's frightening how many calls I receive from people who have *no* conception of what to feed their new puppy. Read a book or two, attend a dog show and chat with owners, or call on your local humane society. You will receive much friendly assistance, and you will certainly feel more confident when the new arrival joins the family.

If you have children, it is vital to impress upon them the realization that an animal may be a playmate but is never a *plaything*. They should learn to respect their pet's occasional need for privacy and never interfere with him while he is sleeping or eating. They should learn how to pick up and handle animals. This is an important part of our teaching with the groups who visit the ASPCA classroom. Many young children start to pick up our cat, Misty, by the front paws or grab Buffy, our dog, by the scruff of the neck. Buffy and Misty are patient, but I am sure they appreciate it when I demonstrate to the class the *right* way to handle them.

Good care is the best preventative medicine, and the basic essentials of good care are the same for all types of animals. They include diet, grooming, exercise, training, and medical care.

Dietwise, know what to feed, what not to feed, and how much to feed. Sounds simple. But who hasn't seen the fat, wheezing cocker, the gorged fish, and the coffee-drinking parakeet. Coffee was never served in the jungle, and the fat dog may lead a merry life, but it will be a short one.

Keep all articles belonging to your pet scrupulously clean. Disinfect cages and bedding frequently. Put fresh water daily in turtle bowls and fresh gravel in bird cages.

Groom your dog and cat. Frequent baths are not necessary or desirable, but daily brushing and combing will keep your pet clean and give you a chance to spot parasites or incipient skin troubles.

Train your dog in the essentials of good manners.

And please, at the first sign of real sickness, consult your veterinarian. *Don't,* yourself, try to diagnose and prescribe.

These are just a few of the precautions that will protect both you and your pet. I hope I have not made it sound too arduous. Pets are fun and will more than repay any investment of love and care.

Nominations Open for Carol Lane Awards

NOMINATIONS ARE now open for the 1957 Carol Lane Awards. The awards are presented to encourage individual women and organized women's groups to promote traffic safety programs in their communities.

The awards are administered by the National Safety Council through a grant from the Shell Oil Co. They are named for Carol Lane, women's travel director of Shell. The first three winners in both the individual and club categories receive a bronze sculpture and $1,000, $500, and $250 savings bonds, plus trips to Chicago for the National Safety Congress in October.

The contest has been responsible for a great deal of feminine initiative in traffic accident prevention. For example, this year's 6 winners were responsible for the institution of driver training courses in 11 southern high schools; vehicle test programs in 9 Iowa communities; street paving around elementary schools in a new development in Detroit; a chemical test law plus an appropriation for driver education teachers in an eastern State; the alerting of an entire Mississippi county to traffic accident prevention through a contest, an accident survey, skills and attitude tests, and the participation of 4-H clubs; and in a southern city, the formation of a Women's Safety Council representing all women's organizations in the city.

The 1956 contest attracted twice as many entries as in the previous year. The results showed that women all over the United States are taking a hand in getting their communities started in the work of accident prevention.

Deadline for all entries will be midnight, June 15, 1957. Entries should be mailed to (or additional information obtained from) Miss Alice Mills, director of women's activities, National Safety Council, 425 North Michigan Avenue, Chicago 11, Ill.

DISCARDED REFRIGERATORS are killers of children

DURING THE PAST few years you have seen newspaper and magazine reports of the entrapment of small children in discarded refrigerators and other airtight cabinets. In most cases these entrapments result in death.

A number of suggestions have been made to correct this situation. All have some merit, but the really sure way is through education. We must educate children to *stay out of such places* and educate parents to *make these cabinets harmless before discarding them.*

Unless such an educational program is carried on in every community of the Nation, the seriousness of the problem will increase, for there are some one million of these cabinets discarded each year.

Local campaigns can be conducted by the local Safety Council, the schools, the PTA, women's organizations, service clubs, and youth organizations.

Another method, as outlined in a data sheet, is described below:

. . . A secondary approach to this problem is through legislation, either city ordinance or state law. The following model law on abandoned refrigerators has been drafted by the Refrigeration Service Engineers Society. Community action will speed its passage in your locality: "Anyone who abandons, discards, stores or keeps in any place accessible to children, or who, as the owner, lessee, or manager, permits to remain on his premises under his control, a refrigerator, icebox, freezer cabinet or similar container, of a capacity of one and one-half cubic feet or more, which is no longer used for refrigeration purposes, without the attached doors, hinges, lids or latches being removed, is guilty of a misdemeanor and shall be punished by fine of not more than Fifty ($50) Dollars, or by imprisonment for not more than thirty (30) days or both."—Safety Education Data Sheet No. 62, *Hazards of Discarded Iceboxes and Refrigerators.*

To assist these campaigns, the National Safety Council has prepared a Safety Education Data Sheet and poster on the subject. These are available in reasonable quantities without cost. Send your request to Wayne P. Hughes, School and College Division, National Safety Council, 425 North Michigan Avenue, Chicago 11, Ill. Please indicate how the campaign will be conducted in your community.

safety education data sheet

no. 62

Hazards of

Discarded Iceboxes and Refrigerators

Hidden Danger!
DON'T play in old refrigerators or ice boxes because—
YOU CAN'T GET OUT
YOU CAN'T BE SEEN OR HEARD
YOU CAN'T BREATHE
DO tell your parents if you find one!
S-0449-A

Above right, data sheet and, right, poster which are available for the campaign.

RADIO SERIES

THE AMERICAN MEDICAL Association has a radio series consisting of 13 programs on home safety. For further information inquire of the Bureau of Health Education, A.M.A., 535 North Dearborn Street, Chicago 10, Ill.

Full-time Position in Home Safety

HEALTH EDUCATOR I OR II—Immediate opening; state level in Midwest. Salary range between $3,312 and $4,200, depending on experience and qualifications. Write Editor, *Home Safety Review.*

Index to 1956 *Home Safety Review* Available

AN AUTHOR AND SUBJECT heading index to the *Home Safety Review* (for the year 1956, vol. 13, Nos. 1-10 and a special issue) has been prepared by the Library of the National Safety Council and is available free of charge upon request to the council.

A. M. A. Studies Poisoning

(from page 26)

children could be made watchdogs for chemical safety.

The value of radio and television programs presented in such form as to be appealing to both children and parents was stressed. Local chapters of the American Red Cross and the Parent-Teacher Association were mentioned as organizations through which instruction in the home hazards of chemicals could be emphasized. The use of the Committee's exhibit at health fairs and the broadcast of its radio transcription on accidental poisoning over local radio stations were mentioned. A permanent subcommittee was appointed to continue this study of means for improving education of the public in chemical safety. . . .

THE WEATHER BUREAU, U. S. Department of Commerce, recommends the following safety rules in the event of a tornado. For further information see *Tornadoes, What They Are and What to Do About Them,* Weather Bu., U. S. Dept. of Com., Washington, D. C.

TORNADO SAFETY RULES

TO KNOW WHAT TO DO WHEN A WARNING IS RECEIVED, OR A TORNADO IS OBSERVED, MAY MEAN THE DIFFERENCE BETWEEN LIFE AND DEATH! !

● There is no universal protection against tornadoes except caves or underground excavations. When time permits, go to a tornado cellar, cave, or underground excavation which should have an air outlet to help equalize the air pressure. It should be kept fit for use, free from water, gas, or debris, and preferably equipped with pick and shovel.

● **If you are in open country:**

1. Move at right angles to the tornado's path. Tornadoes usually move ahead at about 25 to 40 miles per hour.
2. If there is no time to escape, lie flat in the nearest depression such as a ditch or ravine.

● **If in a city or town:**

1. Seek inside shelter, preferably in a strongly reinforced building. STAY AWAY FROM WINDOWS!
2. *In homes*—The southwest corner of the basement usually offers greatest safety, particularly in frame houses. People in houses without basements should find other shelter, preferably in a storm cellar, although a depression, such as a ditch or ravine, can offer some protection. If time permits, electricity and fuel lines should be shut off. Doors and windows on the north and east sides of the house may be opened to help reduce damage to the building.
3. Standing against the inside wall on a lower floor of an office building offers some protection.

● **If in schools:**

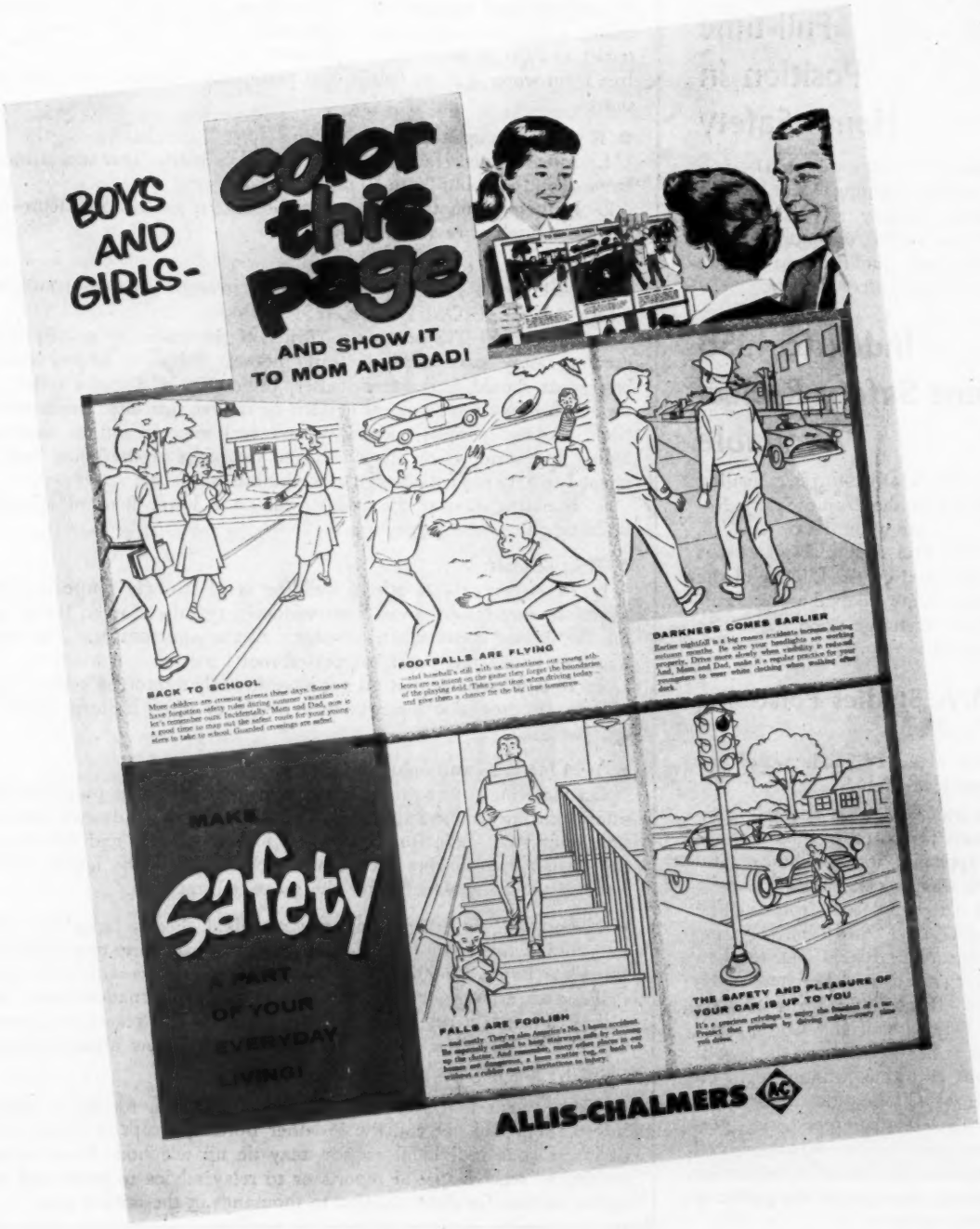
1. *In city areas*—If school building is of strongly reinforced construction, stay inside, away from windows, remain near an inside wall on the lower floors when possible. AVOID AUDITORIUMS AND GYMNASIUMS with large, poorly-supported roofs!
2. In rural schools that do not have strongly reinforced construction, remove children and teachers to a ravine or ditch if storm shelter is not available.

● **If in factories and industrial plants:**

On receiving a tornado warning, a lookout should be posted to keep safety officials advised of the tornado's approach. Advance preparation should be made for shutting off electric circuits and fuel lines if the tornado approaches the plant. Workers should be moved to sections of the plant which offer the greatest protection.

● Keep calm! It will not help to get excited. People have been killed by running out into streets and by turning back into the path of a tornado. Even though a warning is issued, chances of a tornado's striking one's home or location are very slight. Tornadoes cover such a small zone, as a rule, that there are relatively few places in a warned area which are directly affected. You should know about tornadoes though, "just in case."

● Keep tuned to your radio or television station for latest tornado information. Do not call the Weather Bureau, except to report a tornado, as your individual request may tie up telephone lines urgently needed to receive special reports or to relay advice to radio and television stations for dissemination to thousands in the critical area.

SAFETY AD

M. F. Biancardi, manager, Safety Services Department, Industrial Relations Division, Allis-Chalmers Mfg. Co., Milwaukee, Wis., reports that the advertisement shown here appeared on the opening day of school last fall in newspapers of cities in which Allis-Chalmers has plants.